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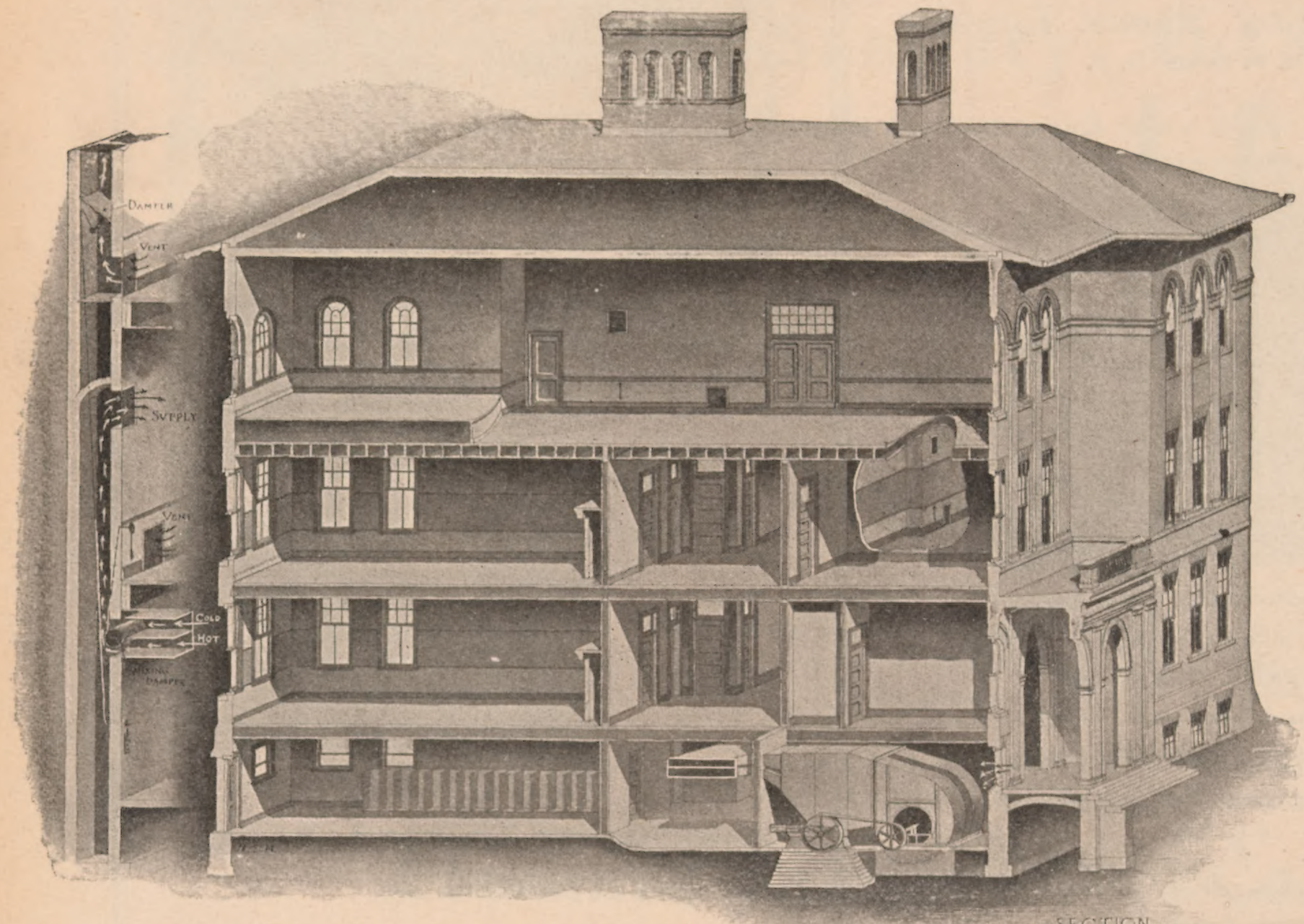

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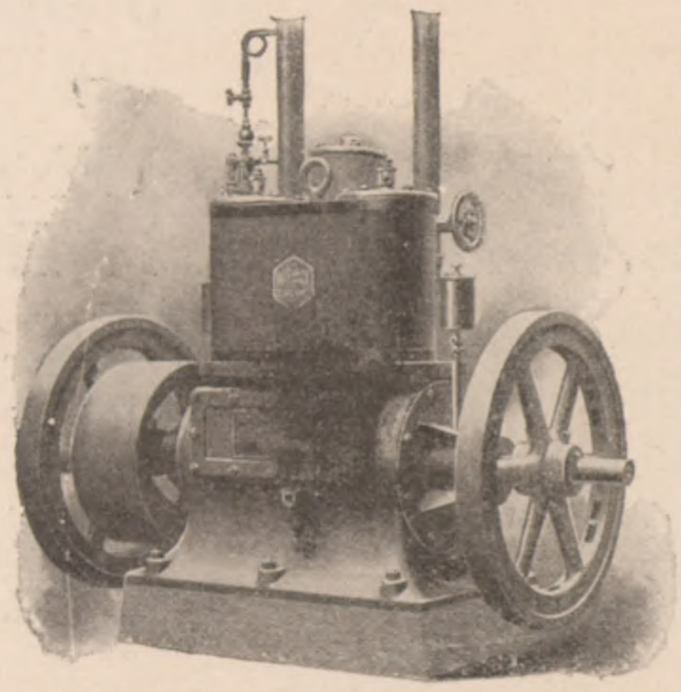

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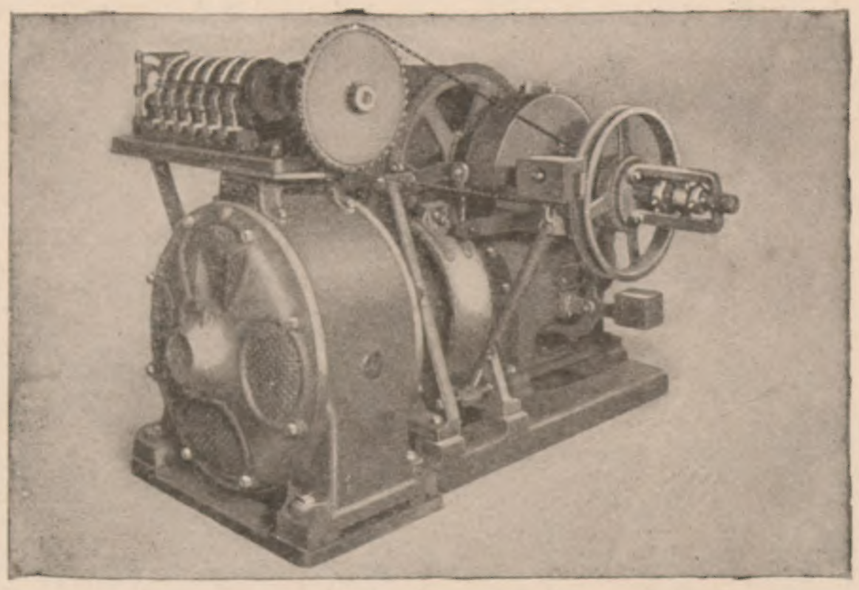

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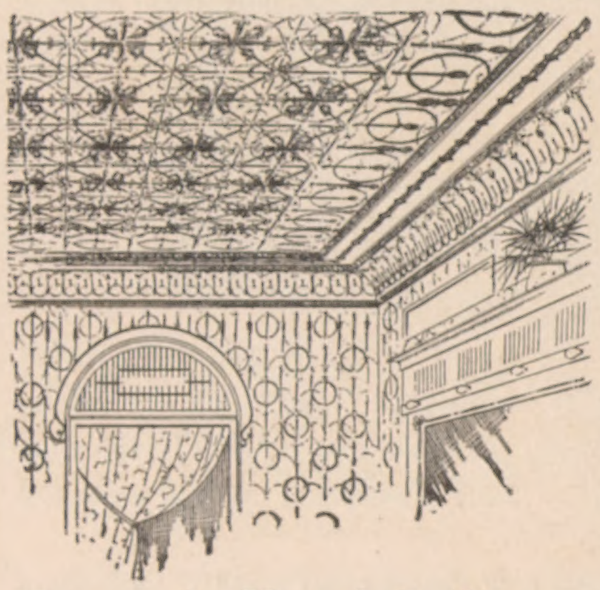

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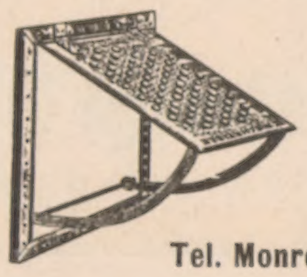

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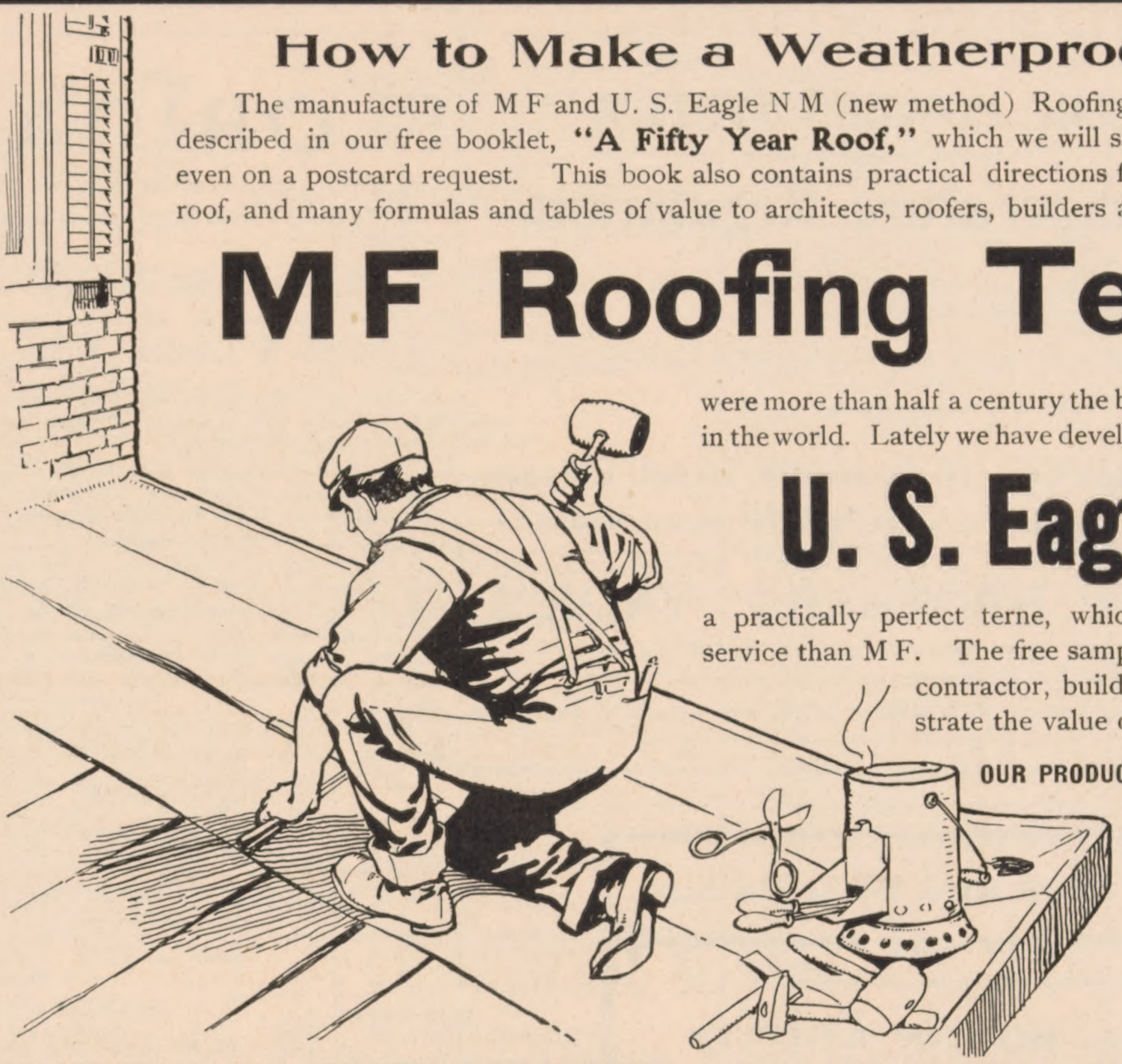

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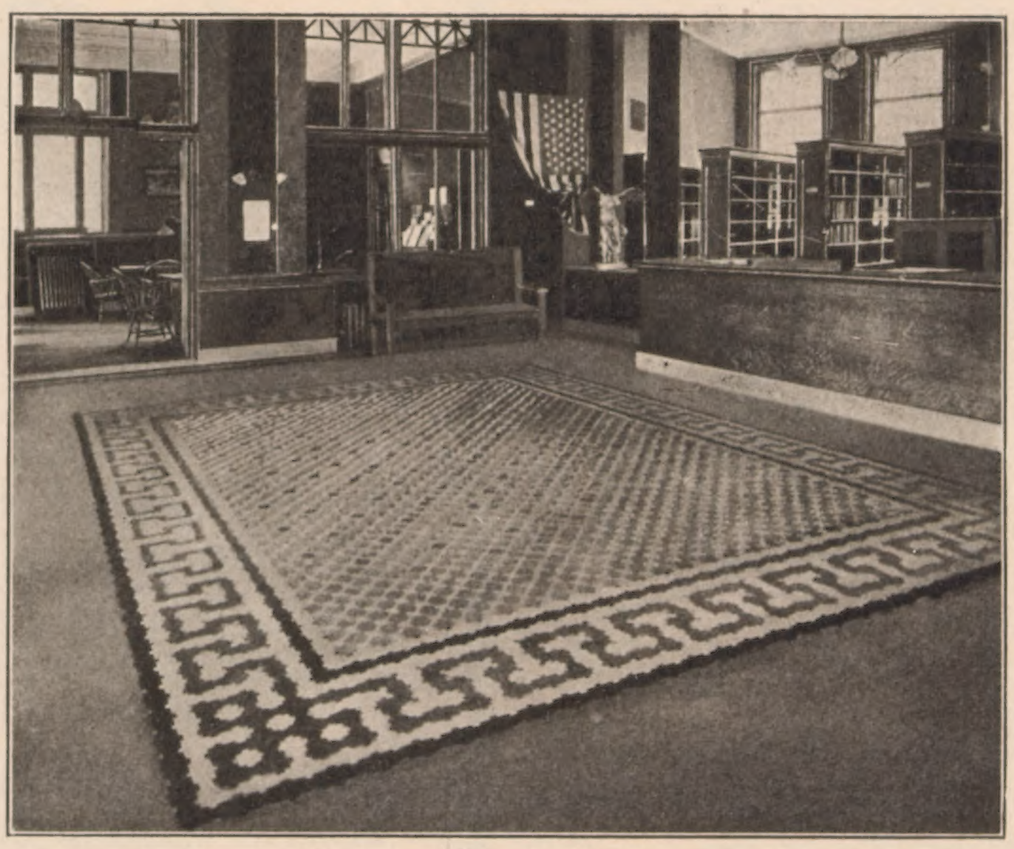

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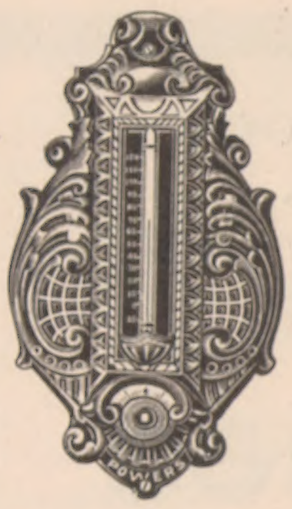

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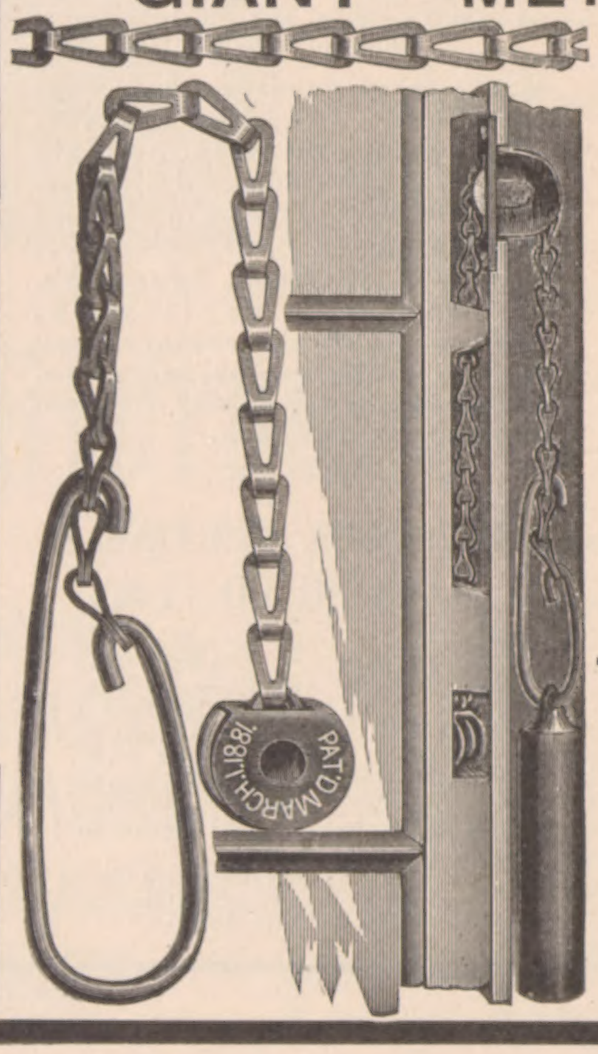

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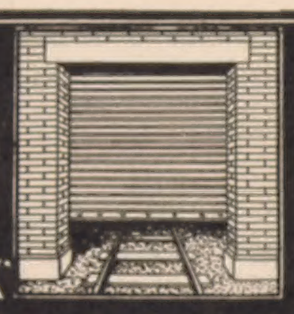

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National Building Contractors Organize.

Organization of a national building contractors' association on a basis which promises harmony between the building trades unions and the employers has been assured by the meeting this week at Chicago. On most essential points there was the utmost harmony shown among those in attendance. They were united upon the open shop, no restriction of output, no restriction of the use of machinery, arbitration of differences between contractors and employes, and between the various unions. Indeed, it is probable this organization will embody in its declaration of principles all the demands made by the Chicago contractors at the time of the building trades strike and lockout in 1900. The keynote of the entire meeting seemed to find expression in the importance of arbitration in all labor disputes, the suggestion meeting with widest approval being voiced by J. B. Strong, of New York, who proposed that agreements insisting on the arbitration of all disputes be signed. "In New York," he said, "we have found that trouble has been avoided by the arbitration boards. When we sign agreements the unions are compelled to submit all their grievances to those bodies, composed of representatives of our association and of the unions. The boards settle disputes not only between contractors and unions, but between unions themselves. Their decisions are final and must be obeyed by contractors and unions alike. We exclude from arbitration boards all paid union agents. In this way we avoid contact with the men of the Parks stamp and have men who are skilled at their trade, and work at it, to deal with." Frederick W. Job reviewed the work accomplished.

The Necessity of Breadth.

A fair judgment of any architectural design requires a breadth of mind no more common among architects than other artists. Often without realization of the fact, the architect remains for years under the influence of the one teacher, the one writer beneath whose sway he first came. Even the prevailing prejudice of the student body is often never wholly eradicated. This naturally leads to exclusiveness, and the average student becomes partial to one set of principles, or the peculiar form of one epoch. The truth is there are no authorities in the matter of architectural appreciation; no rules of any standard value, and the judgment which is of value to an architect must be that which he shall gradually develop himself. He must form his ideals slowly, and if wise will even then hold these opinions somewhat lightly, ever remembering that in a subject on which opinions differ so very widely and have been so changed by the ages of development, there can be no such thing possible as a final judgment. Architecture stands for growth, and originality of conception is to be welcomed, even though it may fail to coincide with the rules of the classroom. New needs must necessarily awaken fresh designs, nor can every century be restricted to the ideals of those before it. Other things being equal, the broader-minded the architect the more modern and interesting will be his work, for such a man can learn from others and soon reaches a higher plane of originality than can ever be attained by any blind follower of a special school.

THE AMERICAN ACADEMY IN ROME.*

ORIGIN AND DEVELOPMENT, BY W. A. BORING.

IN 1894 a number of artists who had been engaged together upon the work of the World's Fair at Chicago established "The American School of Architecture in Rome." Their object was to enable American students of architecture who had passed with honor through leading technical schools, or who had been equally qualified by private instruction, to develop their powers more fully, under the most favorable conditions of direction and environment. The students of the school were selected by competition and received pecuniary aid. The school was wholly supported by the artists referred to and their personal friends.

The rapid improvement in the work of the students, and their enthusiasm, convinced those who were interested that the scope of the school should be made broader, and should include the allied arts of sculpture and painting. To this end representative sculptors, painters and architects, together with other persons interested in the subject, decided in 1897 to found, on the lines of the French Academy in Rome, a school which should be open to American students of sculpture and painting, as well as architecture.

In pursuance of this design, The American Academy in Rome was incorporated under the laws of the State of New York, in June, 1897. A constitution was then adopted and suitable rules made for the government of the institution. All these steps were taken under advice of competent legal counsel. In 1901 the Secretary of State of the United States authorized the ambassador at Rome to accept the position of trustee ex-officio of the Academy, and directed him to secure for it "all the privileges and exemptions that are accorded by the Italian Government to like institutions of other countries."

The Academy is, therefore, legally established and competent to receive and hold any moneys that may be donated.

The Academy, like the School of Architecture, has been until the present time supported solely by the incorporators and a few of their friends, to the end that the usefulness, importance and practicability of the undertaking might be fairly demonstrated before any public request was made for funds for a permanent endowment. For this reason the number of scholars sent to Rome has of necessity been small, and the facilities and conveniences for work have not been such as would be afforded by an older, well-equipped and well-endowed institution.

But now the work of the Academy has justified its existence. It is no longer an experiment. It is an established institution, working along the same lines and for the same end with the French Academy, whose preëminence in the world of art has been proved by the experience of more than two hundred years. The incorporators feel that the time has come when they have the right to ask the friends of art in America for a permanent endowment; and to ask them also to become members of the corporation, in order to help provide funds for current expenses until such time as the income of the endowment fund is available for this purpose.

THE WORK OF THE ACADEMY AT ROME, BY THEODORE ELY.

PHILADELPHIA, October 13, 1903.

Mr. Glenn Brown, Secretary, The American Institute of Architects:

In order that the absence of a formal paper may not be construed as an abatement of interest upon my part in the affairs of the American Academy in Rome, I desire to say informally that I feel more strongly than ever that the work the Academy has been doing in a modest way for nearly ten years has fully demonstrated its value, and I trust that the time is not far distant when it will be established upon a footing that will enlarge its usefulness. To that end, I expect to give as much help as possible, and to continue to serve upon its Board of Directors so long as my services may be required. There is no other subject in which I feel a deeper interest.

It must be conceded that men under whose direction millions of dollars are to be spent annually in the construction of important buildings should receive special training to fit them for the task. I refer to the work of the sculptor and the painter, as well as to that of the architects of buildings and landscapes. There is nothing more certain than that the American public is growing more and more critical, and that unintelligent and ill-considered designs, poorly executed, will not be tolerated indefinitely; in other words, men who are not well trained will not be intrusted with important commissions.

More than ever, through increased facilities for travel, our people have been in touch with the great monuments of art and architecture, and, consequently, are no longer satisfied with the mediocre. The real impetus began with the Columbian Exposition, which furnished a most striking illustration of how strongly artistic arrangement, construction and decoration appeal to the public, and how tenaciously it holds the impressions received from the contemplation of beautiful objects.

How shall the demand for specially trained men be met? Simply through the founding of a school upon broad lines, in which *our* young men may have the unusual opportunities already provided by every other progressive country.

Of all training, that of establishing a standard of good taste is the most difficult, and requires the longest time and best opportunities. It is this training that the American Academy in Rome has undertaken.

Not the least valuable features of professional training are that it eliminates from consideration young men who, through indolence or lack of natural ability, are not amenable to its influence, and fixes the relative standing of the others. Following this process of elimination there will remain a few young men who have been endowed by nature with exceptional ability, and it is with these, and these only, that the Academy will deal. After competitive examination and selection through the great National Societies, the Academy will receive them and give them the special training to which I have referred.

I believe that great and permanent good will come to this country through the efforts of the Academy, and I therefore trust that the Institute as a body, and its members as individuals, will aid the Board of Direction whenever possible, in awakening the interest of the public in its welfare.

ACADEMIC TRAINING IN SCULPTURE. THE ROMAN ACADEMY, BY AUGUSTUS ST. GAUDENS.

I have been asked to express my ideas concerning the Roman Academy. What I have to say can be said in a few words and I take pleasure in so doing, not only from a feeling of sentiment arising from my early associations with the Ecole des Beaux Arts and its organization, but more because I am of the firm conviction that an institution such as that is an admirable one.

My reason for thinking it admirable is my belief that the strenuous competition required to gain access to the Villa Medici, as well as the four years of study in that wonderful spot, tend to a more earnest and thorough training than could be gained under the present conditions of life in our times.

I am not of those who believe that only the few who possess marked talent should attempt to be artists, although I do think that there are but a small number in the world who are gifted and who possess that indefinable quality, that elusive something which makes the great artist. In art, as in everything else, only the fittest survive. But in our civilization a certain portion of the population will go into the fine arts "willy nilly," to sooner or later fall out back to what the law of the survival of the fittest brings them to. However, this great band of the unfit have their work to perform; their love of the beautiful contributes to happiness and tends to a wider enjoyment of life in the revealing of beauty where otherwise it would have been ignored.

I know it is a question whether such a knowledge increases the general happiness and morality of a community. I firmly believe it does, as I believe that any effort to do a thing as well as it can be done, regardless of mercenary motives, tends to the elevation of the human mind.

The result required by the system of the Ecole des Beaux Arts and the School of Rome, however, from the serious education, is that they will be better workmen in each of the various vocations they finally fall into. In our period of hurry and of gaining ends, no matter how superficial, in the quickest possible way, no one will dispute but this is a healthy fight to make.

In the repeated attacks that are made on the Roman Academy and on the Ecole des Beaux Arts and in the incessant cry for greater freedom in the development of the artistic mind, there is a certain truth. But in the reaction the pendulum swings too far

* Three papers read before the thirty-seventh annual convention of the American Institute of Architects, held at Cleveland, Ohio, October 15-17, 1903.

and the real question is lost sight of. There is a middle ground on which to stand. It seems to be rarely realized that the very men who are shown as examples, were, if not actually brought up in the School of Rome, all men of a thorough academic training. Only after such training does the mind become sufficiently mature and the individual personality so developed as to be able to indulge in unqualified freedom and liberty of expression.

Rodin, one of the leaders of the movement against academic training, had had a most thorough and arduous training during the early years of his career, and I am of the opinion that that training, instead of dwarfing or minimizing his extreme power of expression, has been of enormous assistance to it. Leaving out of the question the exhaustive early study of the great masters of the past, Michael Angelo et al., and coming to our own times to the brilliant men of the French school, we find that all have had the same early experience. Paul Dubois, one of the masters of French art, who, although not a member of the Villa Medici, had a training fully equal to that which could be gained there, is one of its strongest supporters. Houdin, Rude, Falguire, men whose work lives and breathes with divine fire, were trained there. Puvis de Chavannes and Boudry, to enter another domain, I may add to my list. It is needless to say that none of these were injured by it.

Sculpture is no more exempt from the necessity of a thorough preparation than is music, architecture or any of the arts and sciences. Only constant diligence and earnest application in early years, harnessed with a natural talent, gives us our master workmen.

The disastrous results to those who ape the mannerisms of such masters as Rodin and follow in their wake are pathetic in their futility and weakness when they are not comic, and their failure leaves them not only bad artists but, and here I come to what I consider the main point of my contention, weak and crude workmen in whatever else they do. I am inclined to think that if it were not for this class and this condition of things I should not be so strong a partisan. But the betterment of this class, and at the same time the help that is given to the young master, makes it worth while.

In the American Academy founded in Rome, the plan is to follow the same lines as the French Academy, but in profiting by their experience, to better it, in that much greater liberty and freedom is exercised in the selection of the students who are to partake of its benefits and in allowing in his life, and the execution of his work while there.

It can not be denied that the four years of undistracted attention, apart from the temptations of a large city, devoid of pecuniary worries and surrounded by a sympathetic environment, where the whole thought is directed to the highest artistic achievement possible in the formative years of a young man's life, can be anything but an enormous assistance and of vital importance to the few who have the divine gift. If it were but one in a century who was helped in this way the institution would be worth while.

THE INFLUENCE OF THE NEW THOUGHT IN DESIGN ON ARCHITECTURE.*

YOU have heard from Mr. Lamb and Mr. Bragdon something of what the new thought in design is. It is, therefore, not necessary and I will not attempt to enlarge upon it. Rather, I will merely mention it as a desire evinced to-day in most of the civilized nations for an artistic expression more clearly expressing modern life and more truly individual than the prevalent scholastic architecture which follows more or less closely classic models.

Mr. Lamb has said that for four hundred years no style worthy of the name has been produced. If I thought now that the "new thought in design" was a deliberate effort to create out of whole cloth an architectural style, I, too, would scoff at the effort, but I do not believe that; I believe that it is simply a reaction from an architecture which does not express us and a desire for one that does.

Four hundred years spent in a more or less vain effort to revamp and refit classic forms to prevalent needs has produced from time to time, as the wave of artistic expression has advanced and receded, phases of the classic styles of architecture that have, on the crest of the wave, so nearly satisfied the local needs of the generation that produced them that they have been looked upon as styles and as true national expression. Their hold upon their producers and their "staying quality" has so steadily diminished, however, each so-called style dying more quickly than its predecessor, that in this country the repetition of these phases of the style come and go like the fashions in ladies' dress, and we find to-day not only a lightning change in styles, but each architect equally dextrous in all and changing them to suit his fancy, often with each building. So that now the client pays his money and takes — the architect's choice. For I think it is perfectly evident that the change in styles follows not so much the demand of the building public as the caprice of the designer. If we pursue this farther and ask why the designer is such a weathercock in what seem to be his convictions, the answer surely is, that finding each fashion in turn ring hollow and untrue, he, in his extremity, tries them all and finds them all, alas, alike.

A trip in some foreign land, with its attendant memories of beautiful buildings of some certain time and place; the reading of some author with his eloquent plea for the style of his particular bias; the slant given to the student in some professional school, these determine most men in the selection of a style to work in and thereafter the precious energies which should be expended in creative work are wasted in an effort to reconcile the facts of his present need with the forms of the fashion of a dead past. To what a sorry pass our designer is reduced "he may read who runs in the streets."

Long years of sterility in the production of ornament has reduced his resources for ornamentation to a pitiful point. A garland, a wreath, a scroll, a leaf or two, a lion, an eagle, the prow of a Roman galley, a handful of mouldings, a cartouch, and — still more cartouches. These constitute the bouquet from which he culls the blossoms with which to deck the child of his fancy. To these, in his extremity, he has added some of the structural members, which, robbed of their function, he now plasters upon the helpless façade of his poor, pathetic offspring.

Long years of blind following and copying of ancient buildings has so dulled his mind to a recognition of the value of the function of his building in determining its form that — it is not overstating the case to say that — he now selects the style in which he is to work and then plans a structure within the lines of that style, stifling the crying needs of its functions where they conflict with the style, or else, with a sigh, allowing them to stand a blot forever on the purity of style of his copy.

All this is not as it should be. It is not fine art, and if that, to our poor bedeviled architect, has too strange a sound in his ears or seems a consideration too remote to be pertinent, then, I say, it is not honest. The client is entitled to his money's worth.

Suppose, if you will, the client entering the sanctum of the architect and saying: "Mr. Peristyle, I wish to build a house on the avenue; I wish it comfortable and simple; I wish it homelike and beautiful, so that my children may grow up in an atmosphere of harmony and beauty. I wish it to be in every way suited to the needs of a simple American gentleman, so that my family may love it as their home and my grandchildren look upon it and live in it as a place, part and parcel of themselves and of their fathers." To which Mr. Peristyle replies: "I perceive, from what you say, Mr. Easy, that you do not understand the latest developments of American architecture. What you say about the home of an American gentleman is delightful and refreshing, but, of course, no American gentleman would wish to be behind the times, and the latest style in American architecture is French. Here is the thing for you — modeled on the lines of the famous corner pavilions of the Louvre in Paris, with a subtle touch of the 'modern' in the decoration, one might almost call it 'exotic.' The sculpture about the entrance, as you will observe, is modern, too. Oh! very modern. These delicious little female figures are just the thing to recall the good old days in Paris. Ah! sir, believe me, this is the thing for you! We do this style in New York as well as they do in Paris. It is the best word in ultra-modern, up-to-date, Franco-American art."

But suppose Mr. Easy wishes a country home and Mr. Peristyle happens to be a Bostonian. His answer will be somewhat as follows: "Sir, your request fills me with the gentle glow of a cultured and respectable joy. What thought could be more delightful than the thought that I, under Pugin, am to be the means of creating for you a home, far from the vulgar crowd, far from the maddening clamor of vulgar Americanism, where you can, with your family and your books, live the Gothic life. For, of course, it must be Gothic. There is nothing else but French, and surely you would not have it French, for what can be more vulgar than the obscene ostentation of the beaux-arts architecture of New York? How strange that they should turn to France and fall under the French influence, when the trend of American culture is so evidently English."

But suppose our Mr. Easy wants an office building. Then, indeed, is Mr. Peristyle "up against it." Mr. Peristyle's answer, be he Latin or Goth, must be: "Well, of course, there are no such buildings in stock, but we can put two or three Florentine palaces on top of each other and then, if we cap it off with a Roman temple, I think it would be rather neat, don't you?" If your tailor, when you ordered a pair of trousers, should say: "We can not give you any trousers, but here are some lovely wheelbarrows," would you feel as if you were getting what you wanted? You might, if there was nothing else to be had, at last consent to take the wheelbarrow, but you would at least insist that he arrange it so that you could put your legs through it.

And so it is with the French palace and the English mansion. The demands of function are hard, cold facts, and the hard-hearted, matter-of-fact American will not take his medicine straight. He insists on such alterations in the French palace or

* The concluding paper in a series on "New Thought in Design," prepared by Hugh M. G. Garden, of Chicago, and read at the fifth annual convention of the Architectural League of America, held at St. Louis, Missouri, October 5 and 6, 1903. The first and second papers of the series were printed on pages 18 and 19, Vol. XLII, No. 3.

the English mansion as will make it at least livable for an American, and the result is almost invariably a bad copy and a very bad home.

This, then, is the situation and these are the reasons that all over the world to-day many men in many ways are striving to go back to nature and shake themselves free from the shackles that they have found intolerable and ridiculous.

The movement finds its first experience in matters of detail, because detail offers the least resistance to the entering wedge. As in the beginning of all movements, great or small, there is the usual excess and the usual mistakes. The captive, turned loose, is "running amuck" and indulging in the antics for which he is to weep tears of repentance. His critics cry, as of old, "I told you so."

But is it not possible that in time he will sober down and prove once more the old axiomatic truth that the freedman is a better worker than a captive? With every design he gathers surety of touch, with every plan he reasons more clearly. The cry is "back to nature," and to nature he goes, copying her forms at first as slavishly as he has been accustomed to copy the dead forms of a dead past. But with every copy the meaning of nature grows more clear, with every attempt to fix the forms of nature in architecture he sees more clearly the truth of architectural expression and learns to catch the spirit and expression of nature, where at first he saw only the letter.

In this connection it is worth while to look back and examine the process of the masters, the men who produced the great styles of the past. They had their methods of construction, as we have ours; they had their local materials, as we have; they had their sense of beauty, their feeling for line, for mass, for rhythm, for texture, for color; they had their site and function for their building, and with these and their human understanding — they built. They did not stop to ask what style, they did not hide their construction under a skin of architecture, nor did they litter their buildings with ornamental devices having no connection or meaning. Nothing appeared on their buildings that had not something definite to say about that particular building; nothing was part of it that was not germane to it.

We have all that they had with the added knowledge of what they did, and yet we have done the most astonishing thing in the world; we have ignored the method of their work and seen only the letter of it. We have seen only what they did without seeing how they did it. Our passion for research has so filled our minds with a litter of data of their work that we are able to-day to reproduce their great masterpieces to a hair. But this pursuit for knowledge of what they did has filled our minds to the exclusion of all else, so that we now say, "We can not improve on the masters, they have said the last word; let us, therefore, continue to do what they did." Time, however, will not have it so. Conditions change and the thing which was perfect for its day and place is useless for our day and our place. We may not do what they did. We must, with what skill we have, work out our own problem; we must, with whatever pain, learn to do our own thinking. We may not, probably we shall not, ever equal the masters, but we can not stop, there is no end to the fight. We must go on even if we never arrive.

This is what the exponents of the new idea in design are doing. They are going on. Their imagination, dimmed by too long feeding upon the ideas of others, their hands grown stiff from too long lying idle, they have at last taken up the task again. They are as little children now. Almost they must begin at the beginning of their art. What wonder, then, that their work seems poor and weak, erratic and unbalanced by the light of what the masters did. Could it be otherwise? Their critics cry out upon them and accuse them of a contempt for the masters since they refuse to copy the masters. Is it not rather that they have heard aright the voice of the masters when their critics have heard amiss? Is it not that they have too fine and too deep an understanding of what the masters did to be guilty of the sacrilege of garbling their works in ignorant imitation? No artist worthy of the name has anything but profoundest admiration and respect for the big men whose work speaks to-day through the centuries, telling us what manner of men lived in the ages past; telling us what were their ideals, their joys, and their passions. To the master who has so spoken to us, in the presence of whose works we stand to-day ashamed, whose magic touch rouses us to a consciousness of what he was and what we may be; who sweeps our emotions as a harpist sweeps the strings of his instrument; to him we bow in reverent admiration. He is our hope and our inspiration. He gives us courage to strive on and in defeat to rise and strive again. To accuse the man of contempt of the past, who opens his heart to the voice of nature, as did the masters, and trusts her to lead him aright even in the face of all human criticism, is to accuse him of stupidity and to be guilty of it.

Recent writers on the so-called "art nouveau" describe its adherents in all lands as "united in a common hatred of the historic styles." And the adopted name of the German workers, the "Secessionists," would seem to prove that in Europe there is something in this feeling. To me it seems utterly wrong. I believe that in America this new thought is and will be positive instead of negative. I do not think we can afford to class ourselves as antagonistic or revolutionary.

Instead, we must unceasingly keep before us the vital facts of American life and conditions. From these we can draw unceasing inspiration. From the governing facts of each problem we can, with free and untrammeled minds, draw the instant and vital solution. This is no empty phrase. You who are architects know that each problem has its immovable, limiting conditions. It has its site, its approach, its exposure to wind and sun, its functional requirements. If these suggest no forms to you, then you are indeed helpless and even incapable of synthetic reasoning. Each problem has its range of possibilities as to materials, constructive and decorative. If your sense of proportion, rhythm and line does not tell you how to give beauty to the forms which the conditions force upon you, if your sense of color and texture does not tell you what materials to use, and how to use them, then your time is wasted in the practice of architecture and your proper place is in some other occupation. It is a simple thing; it requires but the constant exercise of that prevailing American characteristic — common sense. Vigorously to insist that the form shall follow the function. Unceasingly to watch and guard, that no unmeaning or unnecessary ornamentation shall creep in to mar or obscure the simple architectural statement of fact. Ceaselessly to strive to clarify and simplify the expression of function. These are the rules to govern design in architecture, and these are the rules that, if followed, will eliminate the accumulated impedimenta of the historic styles as applied to modern construction.

I plead not for a war on the historic styles, nor for a "new art," but for a common-sense method of work; for a natural growth of each design from its mother earth, simple, truthful and beautiful as the growth of a flower. I have spoken of the "new" thought in design, but it can not be truthfully called new except in a relative sense. Since first designs were made there has been the same desire manifested in ever varying intensity. Human life clamors for artistic expression and inevitably attains it. In the last century travel has become so simple and the printing of books and photographs of architectural record so prolific that every architect may be, and many are, familiar with all styles of all time, both contemporaneous and ancient.

With mind filled and congested with this gamut of artistic lore, it is small wonder that the modern architect has faltered and wandered from the narrow way. To save him, the march of progress in civilization and material achievement has gone forward, parallel with his expansion in historic knowledge, by leaps and bounds until to-day we have reached a crux. To-day civilization calls for, and will not be denied, an architectural expression of its own. This is the real new thought in design. In order to cope with the situation (and he must cope with it), the architect must sharpen up his wits. He must cultivate himself more and history less. His efforts must be to develop his creative faculties instead of to fill the storehouse of his mind with statistics of the past.

Last, let me speak of the joy of working in the new thought, as we have called it. It is almost trite to say that architects love their work. Even as it is, with all its difficult and disheartening limitations, they love it. What, then, will be the sensations of the man who succeeds in producing even a partial success at what, in his heart, he knows to be a work of fine art.

If it is a pleasure to read, to study and to pore over the records of antiquity, if it is a pleasure to measure and redraw the parts of monuments of the past, fitting them with endless pains to some structure of to-day, what then must it be to analyze and dissect a living problem of building and from the knowledge gained, with a free mind to invent the solution? If it is a pleasure to read in a book, how much more is it a pleasure to read in the book of nature? If it is a pleasure to borrow your ideas from others, then it is a boundless joy to have an idea of your own. There is no joy like the consciousness of strength. To have an idea of your own and not to be afraid of it, to trust yourself to carry it out and then to be able to approve it as a sane and sensible work of art, this is the joy of the consciousness of strength and this is a joy as intoxicating as wine.

I wish to read you an editorial which I found a few weeks ago in a weekly paper. It is called "The City Beautiful":

"In carrying out those extensive plans for making the city of Washington one of the wonders of the world, the initial error in the rejuvenating of the White House should not be persisted in and expanded, but carefully avoided.

"The worthy rejuvenators forgot that they were working upon the public house of a democratic republic and turned to imperial palaces for their models. The result is ludicrous, whatever small merit there may be to the work. Of course, it is not easy to carry the democratic idea into architecture and furnishing. It requires originality. It forbids cribbing from the most accessible sources of architectural ideas. But the thing can be done. And until the man or men can be found who can make Washington look like the splendid capital of a democracy, and not like an imitation of an emperor's seat, there should be mighty little money spent by the Congress in expanding Washington. There is no way of preventing plutocrats from putting up their amusing imitations of ducal and princely residences in Europe. But the administration need not try to make the country ridiculous."

It is evidently from the pen of a layman and it is significant of the present situation in architecture. It shows that the new thought in design is not active in the minds of the profession alone. Democratic America clamors for a democratic art and she will not find it in imperial Rome. The product of the present steps in the new art may be, I concede that they are, weak and uncertain, but the influence of this activity is so undoubtedly good that it requires no very violent stretch of the imagination to look forward and see the day when the visitor to our shores from other lands will stand before some of our buildings, perhaps even before the completed "City Beautiful" of Washington, and say, "This is American."

WHAT IS A HOUSE.*

IT would appear a simple, almost ridiculous question to ask what is a house; but it is a question which of late years has puzzled the judges of the High Court not a little, and has caused them to give decisions which it is not easy to reconcile one with another. It has done more than this, it has caused the expenditure of considerable sums on litigation, and, having regard to the unquestionable state of confusion of the law on this point at the present moment it seems likely that the question will be the cause of much more expenditure and a good deal more litigation.

Many of our readers have at some time in the course of their lives — especially if they are architects, surveyors or builders — had to do with restrictive covenants in regard to buildings, such as that only a house shall be erected on this or that spot, or that only a house exceeding a particular sum in value shall be built. But with changes in social habits, and changes caused by the want of space in towns, and from other circumstances, we find a constant increase, not only of flats pure and simple, but of buildings containing two or three separate dwellings. It is not, therefore, very surprising that where covenants in deeds come to be applied to the facts of to-day, difficulties, unforeseen when these deeds were signed, crop up.

It will probably explain the present question best if we refer in more or less detail to the latest decision which raises the question, "What is a house?" This case is that of Ilford Park Estates, Limited, v. Jacobs (Law Reports 2 Ch.D., 1903, p. 523), and it appears in the October number of the official reports. In the deed which produced the litigation there was a stipulation that on a certain plot of land conveyed to the defendant, "No house should be erected of less value than £300." One would scarcely have anticipated much difficulty in applying these words. The trouble arose in this way. The defendant proposed to erect a double tenement building — we avoid the word house — on the plot. These tenements were quite distinct and complete in themselves, and had no communication with each other. They were entered by separate front doors set back under a common archway, and the interior staircase leading to the first tenement was cut off by a 4½ inch brick wall from the ground floor tenement. There were separate water-closets on the ground floor in the rear of the building, that belonging to the first floor tenement being entered by a staircase from the kitchen. There was no way of getting from one tenement to the other, except through the front doors. The cost of the whole building would exceed £300, but the cost of each tenement would be less than that amount, and therefore, said the plaintiff, the defendant is committing a breach of the covenant, and should be prevented by injunction from proceeding with the building.

It may seem at first sight that this was a somewhat unreasonable decision. If there had not been the particular division in the whole building to enable two families to live in it, there is no question that it would have been in accordance with the covenant. Why, then, if for all outward purposes the dwelling was in accord with the covenant, should it be objected to because it was so constructed that two families could live in it? But the reason which may be given in defense of the decision, and which probably influenced the judge's ruling, becomes obvious if we consider what are the motives, in the case of houses built on an estate, for requiring that they should not be below a certain specified value. It is not merely the desire to secure, in an architectural sense, a certain class of building in regard to external appearance; it is the desire to secure a certain class of tenant, or to avoid having tenants on the estate below a certain class. If, for instance, on an estate where houses were specified not to be below a cost of £3,000, a man built a house of that value but divided it up into a dozen small sets of rooms in flats, the result would be that the owner of the estate would have tenants on it of an inferior class to that which he wished to attract, and whose neighborhood would probably be objected to by the superior class of tenants who lived in self-contained houses; to that extent injuring the property. This consideration no doubt complicates the question a good deal from a legal point of view, but it is surely impossible to overlook it.

Apart from this question, no doubt, the definition of a house is capable of being settled purely on grounds of structural character, and ought to be more definitely settled than at present. A house is defined in the Oxford English Dictionary as "a building for human habitation," which for the purpose of settling this kind of dispute is not of much assistance. But in popular opinion a house is, we think, a building intended for human habitation, standing alone or separated vertically from adjoining edifices. It will be immediately asked: Is a building constructed for flats, with a common staircase, a house? The answer can be given at once. It is. For in the case of Kimber v. Admans (Law Reports, 1900, 1 Chancery, 412) it was expressly decided, both by Mr. Justice (now Lord Justice) Cozens-Hardy and by the Court of Appeals, that it was a house. It was, said the judge, none the less a house because it was divided into separate messuages; and Lord Justice Lindley, in the Court of Appeals, said what does "house" mean? "Does it refer to the mode in which the building to be erected is to be subdivided or let, or does it refer to the aggregate of the rooms, or whatever the contents of the building may consist of? I think that the latter is the meaning, the house is the whole amalgamation." This decision has clearly settled that a building — however large — used as flats is a house. Why then should a building divided into two dwellings only not be a house? It seems that some stress has been laid on the fact that in a block used as flats there is a common staircase, but this fact seems immaterial. It might well be that a block of flats could be constructed, for the sake of privacy with several private staircases. Could it be argued, in such a case, that this fact had made it not one, but several, houses? Practically, in regard to questions of letting, it is so; and in the recent case on this subject a decision of the House of Lords seems to have been regarded as showing that a building with separate tenements and separate staircases was not one house. That case is Grant v. Langston, decided in 1900, but that case, an appeal from the Court of Session in Scotland, was a decision on a section of the Customs and Inland Revenue Act, 1875, which runs: "Every house or tenement which is occupied solely for the purposes of any trade or business, or of any profession or calling, shall be exempted from the duties," on inhabited houses. In that case the facts were almost exactly the same as in the Ilford Park case, with this difference, that the ground floor was solely used for business purposes, the upper story as a dwelling house. Therefore for the purposes of taxation there was a separate method of using the premises, and this method had to be regarded from the point of view of the Statute. "A hundred years ago there was not much difficulty," said the Lord Chancellor, in saying what was a "house," but builders and architects have so altered the construction of houses, and the habits of people have so altered in relation to them, that the word "house" has acquired an artificial meaning, and the word is no longer the expression of a simple idea. We believe that, looking at the matter from the popular and common point of view, a house is regarded as a building separated vertically from another. Whether separate staircases make two divisions of one building, in the mind of ordinary men, two "houses," still remains to be settled; and we hope that the Ilford Park case may come before the Court of Appeals, so that those who have to do professionally with building may have the law settled in a systematic manner. How is a surveyor or an architect to advise a client when there is, according to the law as it stands, a vital difference between a flat and what is often called a maisonette? He will be only the more puzzled if he happens to read legal judgments, when he finds one judge relying on a separate staircase, as making an important difference, and another saying, as Lord Davey does, "whether that difference (the separate staircase) is sufficient to make any real distinction, it is not necessary for me to say." On the whole, we doubt whether, if the Ilford case, or one similar in its facts, should go to the Court of Appeals, it would be decided in the same way as Kimber v. Admans. But it is at all events desirable that the law should give professional persons a simple and satisfactory rule, when they come to consider the question, "What is a house?"

*From the *Builder*, London.

THE COMMERCIAL SIDE OF FIREPROOF CONSTRUCTION.

INTEREST in the commercial aspect of fireproofing is in no way better indicated than by the enormous increase in the use of steel during the past few years. In a paper written by P. M. Stewart, late superintendent of buildings in New York, the writer gives expression to several points of practical truth that are worth quoting, though they seem to be written from the standpoint of the underwriter rather than the architect who must design as well as construct. He says:

"It would seem to indicate almost mental aberration to seriously question to-day the efficiency of the better types of fireproof construction. No better proof can be wished for of the fact that fireproof construction really does reduce the fire loss than the favorable premium rates granted by fire underwriters on superior types of construction."

Mr. Stewart further discusses fireproofing and is logical as well as intelligent in placing before the public practical reasons for its almost universal use in the construction of buildings.

"A careful consideration of the matter of fire protection should convince every owner that the introduction of safeguards against fire will bring a fair return in reduced rates on the increased outlay, besides fulfilling a moral obligation which he owes to his lessees, tenants, neighbors and himself.

"Several theaters in New York have had their insurance rates materially reduced because of changes in their construction made at the instigation of the Department of Buildings. That the fireproof character of a hotel is a most desirable advertisement is indicated by the fact that some proprietors who can not honestly claim that characteristic attempt to deceive their patrons by untrue representations. One of the large hotels of New York maintains a room in a burnt condition as an indication of what can happen in a fireproof hotel without the knowledge of any of the patrons or the proprietor. A fire that originated in this room nearly burned itself out before any one was aware of it.

"Municipal regulations all over the country provide for almost every contingency which may occur affecting human life in theaters or other places of public assemblage. Department stores, however, seem to be passed over entirely in the requisites of the city fathers. Theaters and their management are provided for by a code as long as the moral law. In the case of department stores, however, probably three to five times as many people are allowed

to congregate, to the square feet of building occupied, and yet no adequate provision for their safety is made.

"By fireproof materials," says Mr. Stewart, "is meant such as not only do not burn, but which, under the action of fire, remain intact and preserve their strength or the strength of those parts which they protect."

While Mr. Stewart's deductions are from practical experience, the daily reports of fires in costly buildings should be convincing enough to cause any private owner or board of trustees to include hollow tile in the estimate of cost as certainly as brick or stone for the walls, and to omit this provision seems a breach of trust in those who handle public funds and reaches the bounds of criminal parsimony or neglect in the case of private individuals. When one thinks of the responsibility of those who had charge of the construction of the Ottawa University, which burned a few days ago, this seems a mild statement. Here a lighted cigarette, carelessly thrown aside by a student, it is supposed, burned with some loss of life the leading Catholic educational institution in Canada, at a financial loss of $500,000 and an inestimable loss to the people at large. A library of thirty thousand volumes was destroyed and it will be two years before the school can be rebuilt, and meantime it will be impossible to get a place suitable to carry on the work of the institution, with its roll of 450 students.

Collegiate courses and testing laboratories have been established and architects generally are giving more attention to fireproofing as a practical necessity than formerly, but they can not impress upon their clients too strongly the difference between fire-preventing materials and those that in their construction give stability and security as well as in the indestructibility of the material used. To again quote Mr. Stewart: "The advantage of using incombustible materials is self-evident. Incombustible materials are not necessarily fireproof, but by fireproof material is meant only such as not only do not burn, but, after being exposed to a fire for one hour at a temperature of 1,700 degrees, will withstand a stream of water of at least thirty pounds pressure and remain intact."

DONATELLO.*

LITTLE as we know of the life and character of Donatello, apart from his art, something is indicated in the mere fact, of which many who know and appreciate his works are not aware, that his popular name is a diminutive, and his real name Donato. The circumstance seems out of keeping with the usually severe and intellectual character of his work, and therefore we must connect it somehow with his personality, and conclude from it that he was one of that class of artists whose greatness appears mainly in their productions, and who, outside of their art, are not notable for any special seriousness or dignity of character or manner. Even in that more naïve age people would hardly dub a man "Little So-and-So" unless he were rather an ordinary sort of person in every-day life—a man you could clap on the back and crack jokes with. One could not for a moment fancy Michelangelo ever being known as "Buonarottelli." And the consideration is not without its artistic significance. There is a very parallel kind of difference between the works of the two men. Serious in his artistic aim as Donatello was, it is the seriousness rather of a gifted and earnest craftsman to whom the art was everything, than of a great mind to whom the art was a form of expressing thought which was greater and deeper than the artistic form. Behind Michelangelo's sculpture and painting there is something else which is above the visible work, something which prompted it, but which it could only partially express. Such figures as those of the Medici tomb, the Delphic Sybil, the floating figure of the Deity in the roof of the Sistine chapel, have a kind of intellectual significance, which it is impossible to analyze, but which is symbolic of what is greatest in the human intellect. We know and feel that the creator of those works must have been a great and sublime intellect, even apart from his plastic power; and who might rightly exclaim, in regard to his visible productions, "Shall I be judged by only these?" We do not feel this stamp of intellectual greatness, apart from sculptural power, in the works of Donatello. Serious they are, and grave in aim and conception, where the subject is grave, but they do not suggest the existence in their author of a conception beyond what the marble could embody. His figures of various prophets, for instance, are incisive, characteristic and individualized. There is no doubt as to the kind of personage he wishes to portray; and they strike one as being not so much conceptions as portraits of prophets, as if the actual personages had sat to him. The intensity of realism in them is remarkable; but if one compares them (and it seems the fashion to do so now) with the works of a similar class of Michelangelo, it may be said that we are always conscious of a touch of the *bourgeois* in Donatello: an impression which exactly corresponds with the fact that he should have been called by a kind of pet name of good fellowship. Perhaps the only exception to this is what we have always regarded as his greatest work, the "St. George." This figure, as a symbol of courage, confidence, chastity (for there is all that in it), and total absence of boast or pretentiousness, is the highest ideal of a young Christian soldier that art has produced, and denotes in sculpture a conception of such a character which is quite above the ordinary or popular conception. But in this respect it stands alone among his works.

We are not intending in any way to oppose the modern estimate of Donatello as one of the greatest sculptors of the Italian Renaissance; one of the greatest, in fact, in the history of the art. He was for a long time greatly underestimated; he is an instance of one of those artists whose real powers, not appealing to the popular mind, have been long overlooked. The admirers of Canova, in the early part of the last century, had probably for the most part hardly ever heard of Donatello, and would have been astonished had they been told that he was by far a greater sculptor than their idol; just as, at an earlier period, the worshipers of Bernini would have been equally astonished at a similar judgment between him and Donatello. The modern fame of the latter is one of the remarkable examples of the manner in which truth and sincerity and original power in art will always in the long run assert themselves, even after generations of neglect and indifference. But in all such cases of revival there is a tendency to exaggeration; and there is a certain exaggeration in regard to Donatello at present. There is a tendency to class him with Michelangelo, whereas in reality there is a gulf between them, Michelangelo was a sublime idealist in art. Donatello was a realist—but a realist of exceptional power of execution and individuality of style.

The figures made for the Duomo at Florence, of which nine, we are told, are now accepted as the work of Donatello, and which form the earlier illustrations in the book, are for the most part essentially mediæval in feeling; in their directness of expression, their powerful and downright style of execution, and in their absence of grace. One point which the author does not, as far as we observed, allude to, is that in many of them—in the figures, for instance, of Joshua, Jeremiah and Habakkuk, the heads are too large or the stature too short (whichever way one chooses to put it); a common fault in mediæval work. The fault is the greater because the statues were intended to be placed high up, for which reason some of the details of anatomy are (rightly) exaggerated; but in the matter of stature a figure to be placed high up requires exaggeration rather than shortening, to allow for the effect of perspective. What strikes one as most remarkable in these figures is their strong and almost defiant originality of style and character. They are not beautiful, but they are at the farthest possible remove from artistic commonplace; and it is the commonplace which is the death of art. There is not the same strong originality in the seated figure of St. John, which Lord Balcarres admires so much; dignified it certainly is; but while the figures previously referred to are stamped with Donatello's own impress, the St. John is a figure which any competent sculptor might have produced; it has not in the same degree the sign-manual of Donatello. One of the most remarkable of the Florence Campanile sculptures, and the one perhaps that most makes one think of Michelangelo, is the group of Abraham and Isaac, in which the sculptor has shown such a remarkable power in getting two figures into a niche only intended for one, yet in such a manner that the difficulty of the situation seems only the occasion for an additional force and vigor in the design. Isaac kneels just in front of Abraham, forming one vertical line of composition with him, the nude figure of the youth contrasting with the full drapery of his father in a sculpturesquely effective manner. There have been few finer examples of a technical difficulty turned to artistic advantage.

The St. George is a work of beauty in a sense in which the prophets of the Florence Duomo certainly are not; but it is a beauty stern, severe and rather mediæval than classic, in spite of the fine proportions of the figure which we find in this case. On a later page Lord Balcarres makes some excellent comments on the relation between Donatello and the classical school of sculpture. Flaxman, as he says, was justified in the remark that some of Donatello's work could be placed beside the best productions of ancient Greece without discredit. The St. George could; but that is not to say that the St. George is Greek in character, or that Donatello was in any way striving to copy the art of the ancients. "Donatello may be the mediæval complement of Phidias, but he is not his artistic offspring." Any one who thought so could not rightly understand either Phidias or Donatello.

The essential distinction between Donatello and the Greek school is shown again in one of the few of his works in which grace and beauty of line predominate—the beautiful and poetic relief of The Annunciation. Here the figure of Mary, rising and slightly drawing herself back in an attitude expressive of surprise mingled with reverence, has almost equal beauty with Greek sculpture, but a beauty of a different kind; not merely physical, but residing partly in spiritual expression, a quality which Greek art knew not. The most Greek-like work of Donatello is the nude bronze David in the Bargello; there is in this something of the simplicity and directness of aim of Greek sculpture; but it must be admitted that it is not equal to Greek work in actual beauty of design: where Donatello comes into competition with Phidias on this ground he is beaten. But the David is no sham antique; there is none of that attempt to be antique which went far to wreck Canova and almost entirely wrecked Gibson; it has distinctly a Renaissance character of its own, but it is the work which might best be put into comparison with what a Greek might have done, because it depends on form only and not on sentiment. On the other hand, no Greek artist would have consented to execute such a thing as the bust of Niccolo da Uzzano; he would not have undertaken anything so ugly; but as an example of what sculpture can do in forcible and characteristic portraiture

* From the *Builder*, London.

it is unsurpassed. Another most striking element in Donatello's art is shown in the low relief of the "Pazzi" Madonna at Berlin, in which the antique and mediæval spirit seem to meet; the lines and the style are of Greek severity and purity, but the expression in the Madonna's face is such as no Greek artist ever imagined and no Greek woman (probably) was capable of. This we take to be an undoubted Donatello; if it be not his, there must have been some unknown sculptor as great as he in the same style; and that the same artist should have produced this grave and pathetic work as well as the gay and joyous romp of children of the Cantoria Gallery, is a remarkable testimony to his versatility of power. In this one point, too, the portrayal of child life, he was superior to Michelangelo, whose children are not childlike. The greatness of Michelangelo, as Lord Balcarres points out, lay in the fact that he rose to the conception of ideal types of humanity; an abstract position to which Donatello did not attain.

NEW YORK TENEMENT HOUSE REPORT.

ROBERT W. DE FORREST, the Tenement House Commissioner of New York city, has transmitted to Mayor Low the first report of New York's new Tenement House Department. In it he says:

"On January 1, 1902, a new department of the city government, known as the Tenement House Department, was created. Since that time all the tenement houses in New York have been examined and their condition ascertained.

"Tenement conditions in many instances have been found to be so bad as to be indescribable in print; vile privies and privy sinks; foul cellars full of rubbish, in many cases of garbage and decomposing fecal matter; dilapidated and dangerous stairs; plumbing pipes containing large holes emitting sewer gas throughout the houses; rooms so dark that one can not see the people in them; cellars occupied as sleeping places; dangerous bakeries without proper protection in case of fire; pigs, goats, horses and other animals kept in cellars; dangerous old fire-traps without fire escapes; disease-breeding rags and junk stored in tenement houses; halls kept dark at night, endangering the lives and safety of the occupants; buildings without adequate water supply — the list might be added to almost indefinitely.

"The cleansing of the Augean stables was a small task compared to the cleansing of New York's 82,000 tenement houses, occupied by nearly three millions of people, representing every nationality and every degree in the social scale.

"In the period under consideration in this report a new branch of the city government has been organized, its machinery created and a force of about four hundred employes trained, disciplined and educated; far-reaching and important advances in legislation have been secured as a result of the department's action, and radical and vicious attempts to break down the tenement laws defeated.

"The registration of 44,500 owners' names has been secured, thus fixing the responsibility for bad conditions in the tenements; contagious disease has been checked and prevented; 32,825 citizens' complaints have been investigated and the conditions complained of remedied; and an important tabulation and presentation of the population in every tenement-house block in the Borough of Manhattan has been prepared that will be of incalculable value to the city.

"The results of this work are clearly reflected in the reduced death rate, which in 1902 was 18.7 as compared with 20.0 in 1901, and in the first eight months of 1903 has been reduced to 18.0.

"To those who have borne the burden of the organization of the new department, what has been done seems but a beginning — a first step in the endless fight against disease and death."

RADIATOR JOINTS.*

A PERFECT joint from a mechanical standpoint is one which joins the sections together as if they were one piece, the effectiveness and permanency of the connection it forms being not in any way impaired by the method or material used in making the joint. The maximum amount of metal surface should be brought into intimate steam-tight contact and nothing but the metal of the joint itself should be relied upon to form a connection which shall be permanently steam-tight and compensating for any and all changes due to expansion and contraction. It should at all times and under all conditions be absolutely tight from the first, and not dependent upon any consequent rust formation or readjustments to make it efficient. It should also be easy to make up or take apart without special tools or special skill.

A steamfitter in making up a right and left joint first counts the nipple threads into the openings to be connected to ascertain how many turns in the right is necessary to make it tight in that thread, and how many will be necessary to make it tight in the left thread. If, for example, it takes six turns in the right and four in the left to make the joint, he first takes two turns in the right before starting in the left, and then screws both up firmly, with the result that the joints, right and left, are absolutely tight.

In assembling radiator sections where screwed right and left nipples are used, this can not be done, for the reason that everything is machine cut and machine assembled, and it follows that the threads must go up looser than if calculated beforehand and screwed up with a wrench, as is done in a steamfitters' joint. Because of this looseness, and in order to get a tight joint, it is necessary to place a thin manila paper gasket between the hub ends of the sections which face together. *This gasket then eventually forms the joint*, and the nipple practically serves as nothing more or less than a bolt to draw the faces of the hubs together upon the manila gasket. The looseness of the nipple allows moisture to gradually enter, oxidation sets in and rust soon joins the screw nipples to the hub. The metal is then in intimate contact, and this fact is depended upon by manufacturers to a greater or less extent. Rust, however, should not be depended upon to form a mechanically perfect joint, as its formation is uncertain and not uniform, and the conditions under which it is formed are in engineering practice considered unnatural and indicate defective joints. Such joints tightened by rust are frequently disturbed by the ordinary phenomena of the expansion and contraction of the iron. They can not be depended upon, and at the best are not good joints.

Again, the effectiveness and durability of the nipple connection depends upon the *thickness* of the nipple used.

The thickness of a screw nipple is the thickness of its *thinnest* part, which is the distance from the *bottom* of the thread to the inside surface. The *real* thickness of the screw nipple, is, therefore, only about one-half as much as its *apparent* thickness, due to the fact that it is weakened by threads being cut in it.

We claim to have fulfilled the requirements of a "perfect joint from a mechanical view" as fully as possible by the method and use of a properly constructed push nipple. Our direct radiators are put together with uniformly tapered push nipples. These nipples are cut from heavy seamless drawn tubing especially made for this purpose. The openings in the hubs of the sections of the radiators are reamed to a slight taper corresponding with the taper of the nipple. The nipples are inserted in the reamed hubs of the radiator sections, which are then gently drawn toward each other by bolts until they face together — no gaskets or any other substance whatever being used. By this method a larger amount of the surface of the metal nipple and that of the radiator section is brought into immediate and permanent steam-tight contact than is possible in any other kind of joint. The entire thickness of the nipple is taken advantage of, as it is not partially cut through by a thread as in a screw nipple. Rust is not depended upon to make the joint tight and the connection can be easily put together or taken apart with ordinary tools and requires no especial skill. Our push-nipple joint therefore is absolutely dependable, durable and of common sense.

*From *The Boiler Magazine*, Kellogg-Mackay-Cameron Company, Chicago.

PAINTS IN ARCHITECTURE.

THE ECONOMY OF PAINTS.

IT has been pointed out by a writer in the London *Decorator* that the ultimate economy of paints depends on several factors: first cost, spreading capacity, frequency and cost of renewal. From the results of a number of experiments, covering a series of years, he deduces the conclusion that, notwithstanding its higher initial cost in England, zinc white is the most economical paint base available. The factor from which this conclusion was obtained is its greater spreading power, which he finds to be about seventy-five per cent greater than lead. He allows for the same frequency of renewal — four times in twenty years — and yet, with lead at 32 shillings and zinc at 36 shillings per cwt., finds the cost in shillings per one hundred square feet in twenty years to be 2 2-5 for lead as against 1 2-5 for zinc.

If we accept his remaining figures and merely substitute American prices, with lead at $6 per cwt., and zinc at the same price, we shall find the disparity increased to the ratio of 42 cents to 22 cents.

"The relative economic value on twenty years' basis, the highest value being represented by 100," is calculated by this writer, at English prices, to be 100 for zinc and 64 for lead. On the American basis it would be about as 100 to 53.

But whatever may be the case in the English climate, in our drier American atmosphere zinc paints, properly applied, will not require renewal so often as once every four years; in fact, many reputable manufacturers guarantee them for five years, and instances are not few where they have stood well for ten years. Under such circumstances the disparity is, of course, much greater.

Just here a peculiar difference of opinion is worth noting: Every one familiar with paint literature knows the contention of American painters that zinc, though it spreads farther, will not obscure surfaces nearly so well as lead, and, therefore, requires at least three coats to do the work done by two coats of lead. Leaving aside the experience of the writer, who has had plenty of excellent work done with two coats of straight zinc over a zinc primer, we find the official committee of the Master Painters' Association of Paris, who investigated the whole question minutely, asserting that, "with the quantities of oil indicated, with equal weights of solid matters, the covering (obscuring) power of a paint with oxide of zinc base will be the same as that of a paint with white lead base."

This is in exact contradiction of the generally received opinion; but the authority and standing of the committee who make the assertion is above suspicion, and deserves more than casual attention. The entire report is published in the *Bulletin de la Société d'Encouragement pour l'Industrie Nationale*, for June 30, 1903, and sheds much light on this vexed question.

CHARLES JOURDAIN.

MOSAICS.

JAMES W. MCLAUGHLIN, the dean of Cincinnati architects, has, after many years' practice alone, formed a partnership with James Gilmore, under the firm name of McLaughlin & Gilmore.

IN the competition for the Brooklyn municipal building of the eleven competing architects, Prof. D. Despoedalle, of the Massachusetts Institute of Technology, made the award to Washington Hull, of New York.

THROUGH the courtesy of P. and F. Corbin, THE INLAND ARCHITECT is in receipt of a fine engraving, showing the skyline of New York city's great buildings, in which are marked those furnished with Corbin hardware.

MODERN scientific methods in heating and ventilating require absolute mechanical control. This is shown by the varied classes of buildings in which the Powers temperature-controlling devices have been recently installed, among which are the following: Administration building, Hospital for Insane, Philadelphia; Fraimfelter school, Akron, Ohio; Courthouse, Noblesville, Ind.; Glenville school, Glenville, Ohio; Mound school, Cleveland, Ohio; High school, Kankakee, Ill.; National Bureau of Standards, Washington, D. C.; Contagious hospital, Philadelphia.

THE authorities of the Louisiana Purchase Exposition are taking every precaution to prevent the recurrence at St. Louis of any such disastrous fire as that which destroyed the great Cold Storage building at the Chicago Exposition in 1893, and are making adequate provision for water supply by putting in the largest installation of fire pumps in the world. These pumps, which have been purchased from Henry R. Worthington, of New York city, comprise twelve 1,000-gallon standard Underwriter fire pumps, each capable of supplying four fire streams, making it possible to have forty-eight fire streams in use at one time. The pumps are of the duplex double-acting type, and are supplied with air and vacuum chambers of large capacity. The fittings are of composition metal throughout, and the piston and valve rods are of bronze. Every measure has been taken in designing these pumps to insure that they will start at a moment's notice at any time, after having been idle for a long period. They are the pumps recommended by the Associated Factory Mutual Insurance Companies and, in fact, formed the basis of the specifications for fire pumps adopted by the Associated Companies.

THE United States Geological Survey is about to publish, as Professional Paper No. 11, "The Clays of the United States East of the Mississippi River," by Dr. Heinrich Ries. Doctor Ries discusses briefly the origin, physical and chemical properties, methods of mining, purification, commercial value, and uses of clay, and the geologic distribution of clays east of the Mississippi according to their rock derivation; and then he takes up the distribution of clays by kinds, and the description of clay deposits by States. He concludes with a summary of the clay-working industry east of the Mississippi, touching in turn and by States on the manufacture of common brick, pressed brick, fireproofing, roofing tiles, terra cotta, enameled brick, floor tiles, glazed tiles, vitrified brick, drain tile, sewer pipe, fire brick and pottery. The largest brickmaking region in the country is the Hudson River Valley, in New York State, where nearly a billion brick are made annually. Pennsylvania leads in the production of pressed brick. Most of the terra cotta comes from New York, New Jersey and Illinois. Although West Virginia was the cradle of the paving-brick industry, Ohio now leads in the production of vitrified brick. Ohio, Illinois, Indiana and Michigan are the most important producers of drain tile, and Ohio is the main producer also of sewer pipe. Pennsylvania produced over $4,500,000 worth of fire brick, about one-half the total production, in both 1900 and 1901. Ohio, New Jersey and Pennsylvania, in the order named, are the greatest producers of pottery. East Liverpool, Ohio, and Trenton, New Jersey, being the chief centers of production.

AN extensive pump-manufacturing plant, the largest in this country and probably in the world, is now under construction at Harrison, New Jersey. It is to be occupied by the firm of Henry R. Worthington, who employ about three thousand men in their present works at South Brooklyn, Long Island, and Elizabethport, New Jersey. The new plant at Harrison will accommodate from four thousand to five thousand men and will cost in the neighborhood of two million dollars. It consists of a main machine-shop with side galleries over 1,000 feet long, an erecting shop 502 feet long and of the same section as the machine-shop and a high erecting shop 210 feet in length and four galleries in height in the side bays connecting the two shops. The main foundry is 600 feet in length, and there is also a special foundry for small work 410 feet in length, with a building 200 by 60 feet in size for cleaning castings connecting the two. The pattern building is four stories high and 550 feet long, and is divided by fire walls into four sections. The north section will be used for offices and drafting-rooms, the adjoining section for the pattern shop and the balance of the structure for pattern storage. The power house, which will be equipped with the most modern boilers, engines and generators, is a building 172 by 102 feet. Electric power distribution is to be employed throughout, and the grounds will be illuminated by electric arc lights. There are many other buildings which will be used for packing, storing and shipping goods, etc. The buildings are so arranged that additions can be built when the work demands it. All will be connected by a complete system of railroad tracks entering the ends of the buildings and placing the works in direct communication with the Delaware, Lackawanna & Western, The Erie and the Pennsylvania Railroad Systems. The new plant will be devoted entirely to the manufacture of water-works machinery, water meters, cooling towers, condensers, feed-water heaters, centrifugal pumps and steam pumps of all kinds.

ASSOCIATION NOTES.

WASHINGTON CHAPTER, A. I. A.

The eighth annual meeting of the Washington Chapter of the American Institute of Architects was held at the Firloch Club, on Lake Washington, November 4. George H. Bebb, president of the Chapter, read his annual report of the work of the organization.

James E. Blackwell reported on the arrangements for special papers to be read during the coming year. Responses have been received from a number of persons, both in Seattle and in other cities, contributing to the program. Charles H. Bebb, chairman of the committee appointed to consider the matter of making an architectural exhibit, reported that the committee had received encouragement for the proposition, and that an exhibit would be arranged for.

The election of officers for the ensuing year resulted in the continuation in office of the present officials. The officers of the chapter are:

President, Charles H. Bebb; first vice-president, George W. Bullard; second vice-president, James E. Blackwell; secretary, Emil de Neuf, and treasurer, T. Josenhans.

NEW PUBLICATIONS.

A HANDBOOK ON FIRE-PROOFING. Catalogue of the National Fire-Proofing Company, of Pittsburg, Pennsylvania, U. S. A. Abridged edition. Author, Henry L. Hinton, Engineer, National Fire-Proofing Company. New York: National Fire-Proofing Company. 1903. Price, $3.

Although this work is the first attempt that has yet been made to consider hollow terra cotta fireproofing sections from the standpoint of the engineer, in accuracy of detail and in the vast quantity of information compiled it is one of the most valuable additions to the architect's library that has appeared for many years, and fills a need that, with the enormous growth of steel and hollow tile construction, has become an absolute necessity. In the special consideration of material, terra cotta of a definite character, embracing all the factors necessary in fireproof constructions, as established by a great number of impartial tests made at the Columbia University School of Mines, is considered in detail. It is noticed also that this fireproof material is treated in this work in connection with specific floor-arch sections in the same way as rolled steel sections are considered when used as floor supports. These have, however, a factor of safety of seven rather than four. The volume, which is so creditably compiled by Mr. Hinton, and which treats in considerable length of his "Serrated Arch" floor-arch construction, is but introductory to one of greater scope and detail. This work should be found in every office and the more complete treatise will be awaited with considerable interest, as the growth of steel and hollow tile construction is so rapidly taking the place of all forms of slow-burning wooden beams and other forms of construction that, because of the supposed expense of hollow tilework, has obtained considerable vogue, but is being rapidly condemned as inadequate and losing in prestige through the low cost of genuine fireproof construction.

OUR ILLUSTRATIONS.

Residence, Los Angeles, California.

Residence, Denver, Colorado. F. J. Sterner, architect.

Temple Bethel, Detroit, Michigan. Albert Kahn, architect.

Residence, Los Angeles, California. F. L. Roehrig, architect.

Residence at Detroit, Michigan. A. W. Chittenden, architect.

Residence at Los Angeles, California. Hunt & Eager, architects.

Carnegie Library, Washington, D. C. Ackerman & Ross, architects.

Residence of Doctor Newman, Detroit, Michigan. H. P. Kirby, architect, New York.

Hayden Hall, College, Cleveland, Ohio. C. F. Schweinfurth, architect.

United States Government Building, Portland, Oregon. James K. Taylor, United States Supervising Architect.

Residence of T. E. Copeland, Jenkintown, Pennsylvania. Horace Trumbauer, architect, Philadelphia. A view of stable also is shown.

Photogravure Plate: Home for the Friendless, New York city.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Studebaker Building, New York city.

Interior Views, Keith's New Theater, Philadelphia. Bruce Price and A. E. Westover, architects. The Crystal Room and View in Lobby are shown.

The Blair Building, New York city. Carrere & Hastings, architects. Façade, Entrance Detail and Two Interior Views are shown.

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